

IN THE CLAIMS:

Please amend claims 21-23 as follows:

1-18 (Cancelled)

19. (Original) A method for manufacturing an optoelectronic waveguiding device, comprising the steps of:

forming a first optoelectronic device element on a semiconductor substrate;

applying a first resist layer to said first optoelectronic device element;

etching said first optoelectronic device element;

forming a second optoelectronic device element in said etched area on said semiconductor substrate;

applying a second resist layer;

etching said second resist layer to remove a crystal defect formed between said first and second optoelectronic elements; and

forming a waveguide from a bulk crystal in said etched crystal defect area, wherein said waveguide from a bulk crystal optically connects said first and second optoelectronic elements.

20. (Original) The method of Claim 19, wherein said first and second optoelectronic elements include MQW structures.

21. (Currently Amended) A method for manufacturing an optoelectronic waveguiding device, comprising the steps of:

forming a first layered structure on a substrate, said first layered structure comprising a first optical confinement layer, a first MQW layer, and a second optical confinement layer;

forming a protection mask on or over said first layered structure in part which should become a first optoelectronic device element;

etching other than part where said protection mask has been formed, and thereby etched said first layered structure comprising a first optical confinement layer, a first MQW layer, and a second optical confinement layer at said other than part;

forming a second layered structure on said substrate which exposed by said selective etching process, said second layered structure comprising a third optical confinement layer, a second MQW layer, and a forth optical confinement layer, and said second layered structure being formed by a first butt-joint process;

forming a second mask that has an opening on said second layered structure in the vicinity of a crystal defect area formed in the vicinity of said first butt-joint portion ~~protection mask, and removing said crystal defect area~~ second layered structure which is not masked and is exposed, and then ~~exposing~~ said substrate at ~~said crystal defect area~~; and

forming an third optical waveguide made of a bulk crystal over said substrate at said opening ~~crystal defect area~~,

wherein each a first and second optical waveguides in said at least said first and second layered structures are connected to each other with said third optical waveguide.

22. (Currently Amended) A method for manufacturing an optoelectronic waveguiding device according to Claim 21, wherein said first layered structures is a laser part and said second layered structure is a modulator part.
23. (Currently Amended) A method for manufacturing an optoelectronic waveguiding device according to Claim 21, wherein said first layered structures is a modulator part and said second layered structure is a laser part.